

CLAIMS

1. A substrate polypeptide for ADAMTS-13, which begins at one of amino acids 764 to 1605 and ends at one of amino acids 1606 to 2813 of the amino acid sequence of wild-type human VWF depicted in SEQ ID NO: 1 in the Sequence Listing, wherein the polypeptide beginning at amino acid 764 and ending at amino acid 2813 of SEQ ID NO: 1 of the Sequence Listing is excluded.

2. A substrate polypeptide for ADAMTS-13, which begins at one of amino acids 1459 to 1605 and ends at one of amino acids 1606 to 1668 of the amino acid sequence of wild-type human VWF depicted in SEQ ID NO: 1 in the Sequence Listing.

3. A substrate polypeptide for ADAMTS-13, which begins at one of amino acids 1459 to 1600 and ends at one of amino acids 1611 to 1668 of the amino acid sequence of wild-type human VWF depicted in SEQ ID NO: 1 in the Sequence Listing.

4. A substrate polypeptide for ADAMTS-13, which begins at one of amino acids 1554 to 1600 and ends at one of amino acids 1660 to 1668 of the amino acid sequence of wild-type human VWF depicted in SEQ ID NO: 1 in the Sequence Listing.

5. A substrate polypeptide for ADAMTS-13, which begins at amino acid 1587 and ends at amino acid 1668 of the amino acid sequence of wild-type human VWF depicted in SEQ ID NO: 1 in the Sequence Listing.

6. A substrate polypeptide for ADAMTS-13, which begins at amino acid 1596 and ends at amino acid 1668 of the amino acid sequence of wild-type human VWF depicted in SEQ ID NO: 1 in the Sequence Listing.

7. A mutant substrate polypeptide for ADAMTS-13, which has an amino acid sequence homology of at least 50% or higher to the substrate polypeptide for ADAMTS-13 according to any of claims 1 to 6.

8. A mutant substrate polypeptide for ADAMTS-13, which has an amino acid sequence homology of at least 70% or higher to the substrate polypeptide for ADAMTS-13 according to any of claims 1 to 6.

9. A mutant substrate polypeptide for ADAMTS-13, which has an amino acid sequence homology of at least 90% or higher to the substrate polypeptide for ADAMTS-13 according to any of claims 1 to 6.

10. A mutant substrate polypeptide for ADAMTS-13, which is different from the substrate polypeptide for ADAMTS-13 according to any of claims 1 to 6, by one or more amino acid deletion, insertion, substitution, or addition (or combinations thereof) in the amino acid sequence of the substrate polypeptide for ADAMTS-13 according to any of claims 1 to 6.

11. The substrate polypeptide or mutant substrate polypeptide for ADAMTS-13 according to any of claims 1 to 10, having a tag sequence attached at the N-terminal and/or at the C-terminal.

12. The substrate polypeptide or mutant substrate polypeptide for ADAMTS-13 according to claim 11, wherein the tag is selected the group consisting of proteins, peptides, coupling agents, radioactive labels, and chromophores.

13. The substrate polypeptide or mutant substrate polypeptide for ADAMTS-13 according to claim 11 or 12, wherein the tag is for immobilization on a solid phase.

14. The substrate polypeptide or substrate mutant polypeptide for ADAMTS-13 according to claim 13, which is immobilized on a solid phase.

15. A method for measuring ADAMTS-13 activity in a subject, which comprises contacting a substrate polypeptide or mutant substrate polypeptide for ADAMTS-13 according to any of claims 1 to 14, with plasma obtained from a normal subject, followed by analyzing resultant polypeptide fragments to make a control; and contacting said substrate polypeptide or mutant substrate polypeptide for ADAMTS-13 according to any of claims 1 to 14, with plasma obtained from the subject, followed by analyzing resultant polypeptide fragments in a similar way and making a comparison with the control.

16. A high throughput method for measuring the activity of ADAMTS-13 in plasma from subjects, which comprises employing a substrate polypeptide or mutant substrate polypeptide for ADAMTS-13 according to any of claims 1 to 14.

17 A diagnostic composition for *in vitro* test of the decrease or deficiency of ADAMTS-13 activity in a patient, comprising a substrate polypeptide or mutant substrate polypeptide for ADAMTS-13 according to any of claims 1 to 14.

18. A kit for *in vitro* test of the decrease or deficiency of ADAMTS-13 activity in a patient, comprising as the essential component a substrate polypeptide or mutant substrate

polypeptide for ADAMTS-13 according to any of claims 1 to 14.

19. Use of a substrate polypeptide or mutant substrate polypeptide for ADAMTS-13 according to any of claims 1 to 14, for producing the diagnostic composition according to claim 17 or the kit according to claim 18.